

WHAT IS CLAIMED IS:

1. A method of producing an active matrix substrate, comprising:

forming a semiconductor film used to form the transistor and simultaneously forming the semiconductor film for film quality evaluation in a region to be used as the film quality evaluation region, and then forming a gate insulating film used to form the transistor and simultaneously forming a gate insulating film in the region to be used as the film quality evaluation region;

forming a conductive film used to form a gate electrode of the transistor and then patterning the conductive film so as to form the gate electrode and simultaneously removing the conductive film from the film quality evaluation region;

selectively introducing an impurity into the semiconductor film via the gate insulating film so as to form source and drain regions of the transistor and simultaneously introducing the impurity also into the semiconductor film for film quality evaluation via the gate insulating film in the evaluation region;

forming the interlayer insulating film in a layer on the surface of the gate electrode and simultaneously forming the interlayer insulating film in the evaluation region, in a layer on the surface of the gate insulating film in the evaluation region; and

forming a contact hole, for connection to the transistor, in the interlayer insulating film and simultaneously forming, in the film quality evaluation region, the opening in the interlayer insulating film in the evaluation region and in the gate insulating film in the evaluation region.

2. A method of producing an active matrix substrate, comprising:

forming a semiconductor film used to form the transistor and simultaneously forming the semiconductor film for film quality evaluation in a region to be used as the film quality evaluation region, and then forming a gate insulating film used to form the transistor and simultaneously forming a gate insulating film in the region to be used as the film quality evaluation region;

forming a conductive film used to form a gate electrode of the transistor and then patterning the conductive film so as to form the gate electrode and simultaneously removing the conductive film from the film quality evaluation region;

selectively introducing a high concentration of impurity and a low concentration of impurity into the semiconductor film via the gate insulating film so as to form the lightly doped source/drain region and the heavily doped source/drain

region of the transistor, respectively, and simultaneously introducing one of the high concentration impurity and the low concentration of impurity into the semiconductor film for film quality evaluation via the gate insulating film in the evaluation region;

forming the interlayer insulating film in a layer on the surface of the gate electrode and simultaneously forming the interlayer insulating film in the evaluation region, in a layer on the surface of the gate insulating film in the evaluation region; and

forming a contact hole, for connection to the transistor, in the interlayer insulating film and simultaneously forming, in the film quality evaluation region, the opening in the interlayer insulating film in the evaluation region and in the gate insulating film in the evaluation region so that the semiconductor film for film quality evaluation is exposed.

3. A method of producing an active matrix substrate, comprising:

forming a semiconductor film used to form the transistor and simultaneously forming the semiconductor film for film quality evaluation in a region to be used as the film quality evaluation region, and then forming a gate insulating film used to form the transistor and simultaneously forming a gate insulating film in the region to be used as the film quality evaluation region;

forming a conductive film used to form a gate electrode of the transistor and then patterning the conductive film so as to form the gate electrode and simultaneously removing the conductive film from the film quality evaluation region;

selectively introducing a high concentration of impurity and a low concentration of impurity into the semiconductor film via the gate insulating film so as to form the lightly doped source/drain region and the heavily doped source/drain region of the transistor, respectively, and simultaneously introducing the high concentration impurity and the low concentration of impurity into the semiconductor film for film quality evaluation via the gate insulating film in the evaluation region thereby forming a first semiconductor film for film quality evaluation and a second semiconductor film for film quality evaluation;

forming the interlayer insulating film in a layer on the surface of the gate electrode and simultaneously forming the interlayer insulating film in the evaluation region, in a layer on the surface of the gate insulating film in the evaluation region; and

forming a contact hole, for connection to the transistor, in the interlayer insulating film and simultaneously forming, in the film quality evaluation region, the opening in the interlayer insulating film in the evaluation region and in the gate insulating film in the evaluation region so that the semiconductor film for film quality evaluation is exposed.

4. A method of producing an active matrix substrate, comprising:

first forming a semiconductor film used to form the transistor and simultaneously forming the semiconductor film for film quality evaluation in a region to be used as the film quality evaluation region, and then forming a gate insulating film used to form the transistor and simultaneously forming a gate insulating film in the region to be used as the film quality evaluation region;

forming a conductive film used to form a gate electrode of the transistor and then patterning the conductive film so as to form the gate electrode and simultaneously removing the conductive film from the film quality evaluation region;

selectively introducing an impurity into the semiconductor film via the gate insulating film while covering the semiconductor film for film quality evaluation with a mask so as to form source and drain regions of the transistor; and

forming a contact hole, for connection to the transistor, in the interlayer insulating film and simultaneously forming, in the film quality evaluation region, the opening in the interlayer insulating film in the evaluation region and in the gate insulating film in the evaluation region so that the semiconductor film for film quality evaluation is exposed.

5. A method of producing an active matrix substrate, comprising:

forming a channel region and a gate insulating film of the transistor and simultaneously forming, in a region to be used as the film quality evaluation region, the semiconductor film for film quality evaluation and the gate insulating film for film quality evaluation;

forming a gate electrode of the transistor and simultaneously forming a conductive film in the film quality evaluation region;

forming source and drain regions of the transistor by introducing an impurity via a predetermined mask;

forming the interlayer insulating film in a layer on the surface of the gate electrode and simultaneously forming the interlayer insulating film in the evaluation region, in a layer on the surface of the conductive film in the evaluation region;

forming a contact hole, for connection to the transistor, in the interlayer insulating film and simultaneously forming the opening in the film quality evaluation region so that the conductive film is exposed through the opening; and

etching the conductive film via the opening thereby removing the conductive film so that the gate insulating film for film quality evaluation is exposed through the opening.

6. A method of producing an active matrix substrate, comprising:

forming a channel region and a gate insulating film of the thin film transistor and simultaneously forming, in a region to be used as the film quality evaluation region, the semiconductor film for film quality evaluation and the gate insulating film for film quality evaluation;

forming the gate electrode and the scanning line and simultaneously forming a short-circuit line for electrically connecting at least some of the scanning line and the data line to one another and still simultaneously forming a conductive film in the film quality evaluation region;

forming source and drain regions of the thin film transistor by introducing an impurity via a predetermined mask;

forming the interlayer insulating film in a layer on the surface of the gate electrode and the scanning line and simultaneously forming the interlayer insulating film in the evaluation region, in a layer on the surface of the conductive film in the evaluation region;

forming a contact hole, for connection to the thin film transistor, in the interlayer insulating film and simultaneously forming a cut-off hole so that a predetermined part, which will be cut off later, of the short-circuit line is exposed through the cut-off hole and still simultaneously forming the opening in the film quality evaluation region so that the conductive film is exposed through the opening; and

cutting off the short-circuit line by etching the predetermined part of the short-circuit line and simultaneously removing the conductive film by way of etching via the opening so that the gate insulating film for film quality evaluation is exposed through the opening.